94TH CONGRESS } HOUSE OF REPRESENTATIVES { REPT. 94–990
2d Session } { Part 1

THE OUTER CONTINENTAL SHELF RESEARCH AND DEVELOPMENT ACT OF 1976

APRIL 1, 1976.—Ordered to be printed

Mr. TEAGUE, from the Committee on Science and Technology, submitted the following

REPORT

together with

INDIVIDUAL VIEWS

[To accompany H.R. 11333 which on December 19, 1975, was referred jointly to the Committee on Science and Technology and the Committee on Interior and Insular Affairs.]

The Committee on Science and Technology, to whom was jointly referred the bill (H.R. 11333) to authorize a program of energy research, development, and demonstration to assist in the exploration and development of oil and gas on the Outer Continental Shelf, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill do pass.

I. THE AMENDMENTS

The amendments to H.R. 11333 are as follows:

On page 2, line 10, strike "present".

On page 2, line 22, after the period, insert the following new sentences:

> The project shall include the activities authorized and directed by this Act. All such activities shall be conducted in accordance with the provisions of section 1 of this Act.

On page 3, line 17, after "investigations," insert the following:

> analysis of data obtained under leases or permits issued by the Secretary of the Interior,

On page 3, lines 20 and 21, strike the words "the existence of commercial quantities of"; and on line 21 after the word "resources" insert "and related natural conditions in order to provide information that might be helpful".

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On page 5, line 24, after the word "shall", insert a comma and the following "in accordance with existing statutory authority and this Act,".

On page 8, line 2, after the period, insert the following new sentence:

> In the case of any such information obtained by such agency head pursuant to permit or lease issued, or other agreement made, by the Secretary of the Interior pursuant to any other law or regulation, the period of non-disclosure of such information under this section shall be determined by such permit, lease, or agreement, or by regulation.

On page 8, line 21, after the period, insert the following:

> The report shall also include a comprehensive program and plan for Outer Continental Shelf research, development, and demonstration and resource assessment authorized and directed by this Act as a supplement to the detailed information required by clauses (1) through (4) of this section. Such program and plan shall be prepared with asssitance by, and in consultation with, each agency head referred to in this Act. The Secretary of the Interior shall also consult at an early stage with other interested Federal agencies, the coastal States, and affected local governments, and shall provide an opportunity for public review and comment, including public hearings, on such program and plan at least 90 days prior to submitting such program and plan to Congress. Such public comments shall be included with the final version of the program and plan submitted to the Congress. The program and plan shall include an assessment of the then existing Outer Continental Shelf research, development, and demonstration and resource assessment by private enterprise and the Federal Government with the emphasis on identifying subject matter by category where new or improved research, development and demonstration and resource assessment are needed, and and evaluation of the adequacy of funds devoted to such research and resource assessment by category by private enterprise and the Federal Government.

On page 9, after line 4, insert the following:

> SEC. 11. This Act shall be cited as "The Outer Continental Shelf Research and Development Act of 1976."

II. PURPOSES

The purpose of this bill is to establish for the first time a comprehensive Federal program of research and development to assist in the development of oil and gas located on the Outer Continental Shelf (OCS) of the United States. It will assist in providing new technology where needed so that Outer Continental Shelf exploration and development is carried out in an environmentally and technologically sound manner. Such an R&D program, if properly and effectively implemented, should help gain and improve public support for the development of the oil and gas resources of the Outer Continental Shelf. With

one exception, the bill is primarily aimed at encouraging and supporting non-hardware R&D with particular attention to environmental and safety, particularly worker safety, technology. The one exception is R&D in technology for deep water and hazardous water production where we think some R&D may be needed to insure that development in such areas will be done safely.

The bill gives the Secretary of the Interior the lead agency responsibility to carry out the OCS R&D resource assessment project created by the bill and to coordinate OCS R&D. The project would utilize the expertise of several agencies which have different responsibilities for the OCS under existing statutes. The agencies are principally the Energy Research and Development Administration, the National Oceanic and Atmospheric Administration, the Environmental Protection Agency, the Coast Guard, the Office of Pipeline Safety, and the National Institute of Occupational Safety and Health. The project requires that research and development be done by the Interior Department for the safety of OCS operations; for assessment of oil and gas resources; and for the environmental effects of the OCS operations. The Interior Department is also required to consult with the States concerning these research and development efforts.

III. Background

In August 1953, Congress enacted the Outer Continental Shelf Lands Act (43 U.S.C. 1331, et seq.) which, for the first time, declared a United States' policy "that the subsoil and the seabed of the Outer Continental Shelf appertain to the United States and are subject to its jurisdiction, control, and power of disposition."[1] The Act extends the Constitution and laws of the United States to the shelf area and provided that the OCS shall be administered by the Interior Department.

Pursuant to this authority, Interior has leased through May 1975 over 11 million acres of OCS submerged lands in the Gulf of Mexico and off the Pacific coast. Of this total about 8 million acres remain under lease producing about 910,000 barrels of oil and over 9 million cubic feet of natural gas per day. This has resulted in over $18 billion in revenues, a portion of which goes to the Land and Water Conservation Fund. (Hearings, p. 642.)

The 1953 Act has never been amended. However, in the 94th Congress more than a dozen bills were introduced to amend the Act and were jointly referred to the Committees on Science and Technology, Judiciary, and Interior and Insular Affairs. Many of these bills contain a section calling for a limited R&D safety program concerning OCS operations.[2]

Soon after the adoption of H. Res. 412, Chairman Olin E. Teague wrote to Representative John M. Murphy, Chairman of the Ad Hoc Select Committee on the Outer Continental Shelf that our Committee would hold hearings and consider appropriate legislation concerning

[1] Section 2(a) of the 1953 Act defines the "Outer Continental Shelf" to mean "all submerged lands lying seaward and outside of the area of lands beneath navigable waters", as defined in section 2 of the Submerged Lands Act (43 U.S.C. 1301) "and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control."

[2] For a list of all bills jointly referred and their co-sponsors, see Appendix A.

the R&D and related aspects of OCS operations which would complement that Committee's efforts. On March 15, 1976, Chairman Murphy advised our Committee that the Ad Hoc Committee had agreed to delete any R&D provisions in H.R. 6218, and that H.R. 11333 appears to be consistent with the legislation being prepared by that Committee.

IV. Hearings and Committee Action

On July 8, 9, 10, and 11, 1975, the Subcommittee on Energy Research, Development and Demonstration (Fossil Fuels), which is chaired by Representative Ken Hechler of West Virginia, held comprehensive legislative and oversight hearings on the R. & D. sections of the introduced bills and on the Government's R. & D. efforts concerning Outer Continental Shelf operations. A dozen witnesses testified from several Federal agencies, industry, universities, the General Accounting Office, and the public sector. The hearings demonstrated that there is no coordinated Governmental attention being paid to R. & D. on the OCS. The hearings are printed in two volumes and are entitled "Legislation for Outer Continental Shelf R. & D." The hearings also showed that the present OCS Act is primarily a management statute and does not mandate or direct a specific R. & D. effort.

In general, the Interior Department relies on old statutes (1879 and 1910) of the Geological Survey and the Bureau of Mines to conduct work on the OCS, as the OCS Act does not provide specific R. & D. authority. This has resulted in Interior doing little if any R. & D. work on safety and other areas, except extensive baseline work and environmental studies preparatory to leasing.

The hearings showed that ERDA has broad authority to conduct R. & D. work in connection with oil and gas operations in the Shelf, but has only recently begun studying the proposals concerning oil and gas operations in the OCS. Prior to fiscal year 1975, ERDA testified that several studies of the environmental effects of oil spills were being conducted in the Federal government. In conjunction with EPA, ERDA initiated several other studies. By the time of the hearings ERDA had initiated one contract with the University of Rhode Island to improve methods for the prevention and cleanup of oil spills. At the same time ERDA is participating in the preparation of a national health and safety plan for divers in conjunction with NIOSH, NOAA, and the National Heart and Lung Institute.

The hearings also pointed out that ERDA has taken a very limited role in drilling technology. There was no disagreement with ERDA in the hearings that the industry has the economic incentive to conduct the necessary research and development in production technology. However, the hearings showed that increased production from the OCS will require drilling in deeper and more hazardous waters. The technology problems appear to increase geometrically with the increasing depths. Despite the accelerating technology problems, ERDA is only recently beginning to identify areas where R. & D. is needed.

NOAA and EPA also have some authority, but again it is not being utilized effectively in the area of OCS research and development.

Subsequent to the hearings, Congressmen Hechler of West Virginia, Bell, Krueger, and Wirth introduced H.R. 9724. Markup was held on this bill on September 24 and December 18, 1975. It was unanimously ordered reported with amendments on December 18, 1975 and a clean bill (H.R. 11333) was introduced on December 19, 1975. It is co-sponsored by Reps. Hechler of West Virginia, Bell, Blouin, Downing of Virginia, Flowers, Hayes of Indiana, Krueger, Mrs. Lloyd of Tennessee, Pressler, Thornton and Wirth.

The full Committee reported H.R. 11333, with amendments on March 16, 1976, by a vote of 25–0, with a quorum present.

V. Need For Legislation

The Interior Department testified (Hearings, p. 3):

> Production of oil and gas from the OCS now comprises a significant part of our total energy supply. It promises to provide even more in the future. In the OCS, measured and inferred reserves of oil are reported in excess of 6 billion barrels and undiscovered resources, as reported by the Geological Survey, range from 10 to 49 billion barrels. On the OCS measured and indicated reserves of natural gas exceed 103 TCF and undiscovered resources amount to 42 to 181 TCF.
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> These constitute major exploration targets in the Nation's future energy supply and should be sought on an aggressive basis.

To meet these "targets", the Interior Department noted that "expanded R. & D. will be necessary to pace these anticipated future developments." But Interior believed that such efforts could be "handled under existing authority." At the hearings, Interior was also concerned that many of the pending bills would require Interior to do research and development work that is largely done by industry concerning the drilling and production of petroleum.

The Committee agrees with the Interior Department that the Federal agencies should not, as Subcommittee Chairman Hechler observed, "rediscover the OCS drilling platform." It would not be productive for the Government to duplicate industry's R. & D. efforts or to spend large sums in trying to improve drilling and production technologies in shallow water areas. However, there are some important areas where Government R. & D. is appropriate, as the Director of the Geological Survey stated (Hearings, p. 215):

> But with respect to the technologies, the effort we have made thus far has been in developing regulations and standards which put the burden on industry to develop its technology to meet those. However, as Congressman Krueger pointed out, I believe, in his opening statement, several of the organizations which have helped us in examining our regulatory procedures and standards and so on have recommended that the Geological Survey itself develop an R. & D. program in this area. The purpose for that, I believe, as stated by the various organizations, is not that we make an attempt to take

over the R&D effort of the industry but that we have enough of the effort ourselves to be able to understand what the problems are to zero in on areas where the technology is not adequate and where perhaps the industry effort is not adequate, and to have an effort which would help us cope with the overall problem and perhaps stimulate work in the individual areas.

One area of concern is oil and gas operations in hazardous and deep water. As pointed out in a September 1975 report prepared for ERDA by the Westinghouse Electric Corporation "future exploration, production and transport will be required" in OCS areas "which are significantly more difficult of access and are characterized by deeper water, strong winds, higher sea states for longer periods; surface ice from drifting to pack, and permafrost in the soil below the ocean." The report observes that "because of the character of the environment simple extensions of existing technology no longer will suffice for many aspects of petroleum recovery offshore. Research and Development effort is timely."

This is not to say that advanced technology work has not been done in this area. There has been some. In fact, deep sea recovery systems work is reportedly quite far advanced due to efforts in the North Sea area. But work in other areas is still needed. The Westinghouse report suggests possible several areas for investigation such as:

(1) Surface-supported sub-surface drilling system;
(2) Surface independent sub-surface drilling system;
(3) Surface independent subsea completion and production system;
(4) Surface independent pipe lay system;
(5) Submarine tanker system and submerged Arctic port facility; and
(6) Surface independent seismic and oceanographic survey system.

The Committee wants to stress once again that such areas of possible R&D supported by ERDA can only be undertaken if it is clear that the R&D will "supplement, but not supplant" efforts by private industry. The burden will be on ERDA to show this to Congress in future requests for funds for such R&D.

In the area of safety, the Geological Survey is responsible for promulgating regulations and "orders" governing OCS operations, including those aimed at preventing accidents.

The Geological Survey administers the oil and gas operations conducted under leases issued by the Bureau of Land Management. The Survey's regulations (30 CFR, part 250) define the lessee's obligations, require various reports, provide for measuring production and computing royalties, and specify the procedures in case the lessee defaults. The regulations impose on OCS lessees a general obligation to conduct their operations safely and in a "workmanlike manner" and to maintain their equipment for the protection of the leased premises and the "health and safety of all persons," and "for the preservation and conservation of the property and the environment." (Sec. 250.46).

However, the specifics of these obligations are not set forth in these regulations. A Geological Survey (GS) study group, in a May 1972 report entitled "Outer Continental Shelf Lease Manage-

ment Study," stated that the reason for this is that "operating conditions and the geologic environment differ from region to region." Thus, section 250.12 of the regulations authorizes the Survey's area supervisor for the Gulf of Mexico and Pacific regions "to issue OCS orders * * * necessary for him to effectively supervise operations and to prevent damage to, or waste of, any natural resource, or injury to life or property." Paragraph (j) of 30 CFR 250.2 describes these orders as "formal numbered" orders which the appropriate supervisor issues "with the prior approval" of the Survey's Conservation Division to "implement" the Survey's regulations.[3]

According to an October 1, 1974 report of the House Committee on Government Operations, the Survey decided in 1973 that these "highly technical orders are now of sufficient interest to the general public to be published for comment before they are initially issued or revised."[4]

That Committee, however, was critical of the way standards are established by the Survey, particularly the fact that the standards are not based on any R. & D. that it conducts or contracts for. That Committee's report states (p. 75):

> In the area of R. & D., the Survey stated in November 1973 that it has not established an in-house R. & D. program "for a very practical reason—no funds." When the subcommittee [of the House Committee on Government Operations] inquired about this, the Survey replied that in December 1973 it had requested R. & D. funds "in the discussion stages of the annual budget process" within the Interior Department but "these requests were not included in the final budgets which Interior sent to the Office of Management and Budget." The GS added, however, that it plans to include "a budget request for $2 million for fiscal year 1976 to be used for R. & D. purposes."[5]

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[3] The OCS orders issued by the Survey's Gulf of Mexico Supervisor, with the approval of its Conservation Division, are as follows:
Order No. 1, August 28, 1969, "Marking of Wells, Platforms, and Fixed Structures."
Order No. 2, October 28, 1969, "Drilling Procedures off Louisiana and Texas."
Order No. 3, August 28, 1969, "Plugging and Abandonment of Wells."
Order No. 4, August 28, 1969, "Suspensions and Determination of Well Produceability."
Order No. 5, June 5, 1972, "Installation of Subsurface Safety Devices."
Order No. 6, August 28, 1969,Procedure for Completion of Oil and Gas Wells."
Order No. 7, August 28, 1969, "Pollution and Waste Disposal."
Order No. 8, October 30, 1972, "Approval Procedure for Installation and Operation of Platforms, Fixed and Mobile Structures, and Artificial Islands."
Order No. 9, October 30, 1970, "Approval Procedure for Oil and Gas Pipelines."
Order No. 10, August 28, 1969, "Sulfur Drilling Procedures off Louisiana and Texas."
Order No. 11, May 1, 1974, "Oil and Gas Production Rates, Prevention of Waste, and Protection of Correlative Rights." (Published in 39 F.R. 15885.)
Order No. 12, August 13, 1971, "Public Inspection of Records."
The orders issued for the Gulf of Alaska on March 9, 1976 (41 F.R. 10105) are as follows:
Order No. 1—"Marking of Wells, Platforms, and Structures."
Order No. 2—"Drilling Procedures."
Order No. 3—"Plugging and Abandonment of Wells."
Order No. 4—"Suspensions and Determination of Well Producibility."
Order No. 5—"Subsurface Safety Devices."
Order No. 7—"Pollution and Waste Disposal."
Order No. 12—"Public Inspection of Records."

[4] H. Rept. No. 93-1396, p. 68.

[5] In its 1974 report, the Committee on Government Operations recommended that the GS "promptly develop an effective research and development program to promote safety and control pollution on the Outer Continental Shelf and request adequate funds for such a program."

But the Geological Survey did not seek $2 million for R. & D. in fiscal year 1976. Only $500,000 was requested by the Geological Survey. With that sum, Interior said it intended to (Hearings, p. 20):

(1) Proceed with an analysis of prototype undersea completion system;

(2) Review environmental and occupational safety systems;

(3) Recommend R. & D. which the government should support.

At our hearings, the Interior Department was asked about this and the reply was as follows (Hearings, p. 20):

> The Department is currently reviewing the total R. & D. effort in support of onshore and offshore mineral leasing. We expect to resolve what level of funding is appropriate through the fiscal year 1977 budget process. We are currently unable to assess the appropriate funding level until a number of policies concerning onshore mineral leasing are resolved, but some increase in the total R. & D. effort is expected.

But in fiscal year 1977, the Department is requesting only $511,000 to conduct Research and Development on Outer Continental Shelf operational safety devices. The Survey explained the purpose of this request as follows:

> The initial program of research began in fiscal year 1976 with the awarding of a contract to Harry Diamond Laboratories of the Army Materiel Command. Under this contract, they will develop an R. & D. plan for safety and anti-pollution devices which will identify problems, conceptualize their solutions and recommend the research and development efforts required to resolve the problems. Also, the technological gaps in industry-sponsored R. & D. will be identified. The next step is to provide Government-sponsored research, development and testing to advance the offshore technology of oil and gas completions in deep waters and to improve safety and pollution control devices. It is anticipated that contracts will be issued in fiscal year 1977 for research on specific items identified during the fiscal year 1976 program.
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> The purpose and objective of this R. & D. effort is to improve the safety of oil and gas operations on the OCS. A safer operation will also reduce the possibility of hydrocarbon pollution of OCS waters.

The Committee is pleased that the Department has started down this road, but as our hearings demonstrated, without an overall approach which identifies the total R. & D. requirements for OCS development, adequate funding will probably not result. An expanded R. & D. program in support of the Survey's regulatory functions is certainly needed to insure that the safety and related OCS standards are requiring the use of the best available technology to protect the workers and the environment. H.R. 11333 will provide such a program.

In the area of oil pollution R. & D., the Environmental Protection Agency in cooperation with the Coast Guard, is mandated by section 104(i) of the Federal Water Pollution Control Act, as amended, to "engage" in R. & D. "relative to the removal of oil from any waters

and to the prevention, control, and elimination of oil . . . pollution." [6]

In addition, ERDA as part of its planning duties under the Federal Nonnuclear Energy Research and Development Act of 1974, is required to develop a program for improved methods "for the prevention and cleanup of marine oil spills".

R. & D. activities in this area by these agencies will be beneficial not only for OCS operations, but also in other areas, particularly in the case of oil spills. Here again the current expenditures are small.

The Survey identified another area where R. & D. could be useful (Hearings, p. 21):

> The Survey needs improved information on state-of-the-art exploration and extraction techniques. Since much of this is not public information it will be increasingly necessary for the Survey to improve its own R&D program to keep abreast of new developments to assure an optimum balance between necessary exploitation and environmental change. This is also essential to adequately access the dollar value to the public of mineral resources.

Another problem area which was identified during the hearings is that of diving safety. The continuing search for energy is taking place at greater and greater depths, and under more hazardous conditions, such as ice. Exploring for our resources under these more hazardous conditions will require undersea work, some of which must be undertaken by divers. The health and safety of these divers must be protected.

Recently, an AFL–CIO union petitioned the Labor Department to promulgate an emergency temporary safety standard aimed at protecting commercial divers. The union contends that persons employed in the commercial diving industry "are exposed to grave danger from exposure to agents which have been established to be toxic and physically harmful and are exposed to new hazards of extra-ordinarily high pressure deep diving in offshore oil exploration projects." The union stated in the petition that "occupationally related fatalities in the Gulf of Mexico among commercial divers have been occurring at a rate of 1,109 deaths per one hundred thousand workers, or at ten times higher than in mining and quarrying." The petition added that this death rate is expected to become worse "as oil exploration moves into deeper waters" on the OCS. The Coast Guard said on November 6, 1975, that 24 divers perished in the North Sea in the last 5 years. A recent news article indicated that 3 more deaths have occurred since then. Clearly, additional R. & D. could help to reduce this death rate.[7]

H.R. 11333 would establish a comprehensive Federal R. & D. program for OCS to deal with these and other problems.

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[6] The regulatory responsibilities assigned to EPA and the Coast Guard under the FWPC Act for oil pollution control do not apply to the OCS (see H. Rept. 93–1396 of Oct. 1, 1974, p. 65). However, from the standpoint of R. & D., these two agencies have a very broad responsibility to conduct R. & D. on oil pollution control and removal in "any waters," as does ERDA.

[7] Under contract with the National Institute for Occupational Safety and Health and with additional support from U.S. Energy Research and Development Administration, National Oceanic and Atmospheric Administration and NIH Heart and Lung Institute, the Undersea Medical Society, Inc., is currently developing a National Plan for the Safety and Health of Divers.

One Geological Survey official, in a November 12, 1975 letter to the Committee, called this legislation "important" and said it "has great merits, one of them being that it focuses the existing government agencies in areas where they have expertise rather than proposing a sweeping reorganization."

VI. Committee Amendments to H.R. 11333

The Committee, in approving the bill, adopted several amendments offered by Rep. Barry M. Goldwater, Jr., which are technical or perfecting in nature and are generally intended to add further support to the intent of the subcommittee and the committee as expressed by the members at the markup of this legislation, as well as a technical amendment.

1. In section 1(d) the word "present" was deleted to make it clear that at all times the Interior Department and the other Federal agencies should make a reasonable effort in their review of R. & D. proposals to insure that such proposals "supplement, but not supplant" R. & D. efforts being conducted by the private sector. During the Committee's hearings, the Geological Survey (GS) explained how it keeps informed about the R. & D. work being done by the private sector. The Survey said (Hearings, p. 21):

> Survey personnel are well-informed on scientific and technical developments related to mineral and energy resources. Staff members review the scientific and technical literature, attend and make presentations at technical meetings, schools, and conferences, and are aware of much academic and industry unpublished non-proprietary R&D through personal contacts.
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> The Geological Survey is also well informed on technological developments in marine oil and gas operations. Our field personnel are offshore every day and are therefore, aware of any new equipment being tested or considered for application. Geological Survey approval must be granted prior to the testing or installation of any new piece of major equipment on the OCS. For example, several subsea production systems are presently on trial in the Gulf of Mexico. Prior to the approval of these systems, they were subject to technical and environmental review by our staff. Any new drilling or production equipment is subject to GS review through plans of exploration, applications to drill, and plans of development. The Survey also maintains a close surveillance of industry research prior to the testing phase.
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> The Government should undertake a program directed at determining in what areas industry is actually conducting R&D work and then should undertake a research, development, and testing program, as necessary, to insure proper regulation and more rapid development of new equipment and procedures. The starting point should be in areas where industry response has been lacking or unsatisfactory.

The Committee believes that if the Survey and other Federal agencies follow this approach they will be in full compliance with section 1(d).

2. Section 2 of the bill was amended by adding two new sentences to the section to make it clear that all activities carried out pursuant to this legislation are coordinated through the project established under the bill by the Secretary of the Interior and that these activities will be carried out by each of the agencies in accordance with, and in furtherance of, section 1 (a) through (g) of H.R. 11333.

3. Section 3(a) of the bill was amended in two ways.

The first amendment makes it clear that, in assessing OCS oil and gas resources, the Secretary of the Interior shall, among other things, analyze raw and processed data obtained by the Secretary from OCS lessees and permittees.

The second amendment deletes any reference to the term "commercial quantities" and adds a phrase aimed at clarifying the intent of the language relative to the assessment of resources and natural conditions by Interior prior to the time of issuing an OCS lease.

The bill is not intended to mandate actual exploration leading to production of OCS energy resources. The amendment makes this very clear. The bill with this amendment makes sure that the Government is not competing with free enterprise on the one hand, but is doing the necessary R. & D. work to prepare for exploration and development and to also provide for cooperative efforts between private enterprise and Government. At the same time, the Committee wants to stress that this legislation is not intended to change any authority that the Interior Department may have today under existing law, such as section 11 of the Outer Continental Shelf Lands Act of 1953 (43 U.S.C. 1340), to conduct exploration work if the Secretary of Interior deems such work appropriate.

The R. & D. authorized by the bill will assist in the exploration of the oil and gas by various methods, such as obtaining non-comprehensive preliminary seismographic or other information about structures through surveys, investigations, etc. It in no sense authorizes the exploration of an entire tract which may be proposed for lease, but only such assessment activities as may be needed in research and development work.

At the subcommittee's July 1975 hearings the Geological Survey witness testified that earlier the Survey determined that core drilling on the edge of the Atlantic OCS would be advantageous to the Government. The Survey negotiated a $1.3 million contract with the National Science Foundation to use the Glomar Challenger in August 1975 for such drilling. But before work could begin the Assistant Secretary's Office cancelled the arrangement, saying that the proposal was not coordinated with the States. Interior testified, however, that it might want to do this at a later time. The Committee intends that this limited type of assessment could be conducted pursuant to this bill.

Section 3(a), as amended, should avoid the possibility that the Federal Government would engage in competition with energy supply companies conducting exploration activities under an exploration permit issued pursuant to the 1953 Act prior to leasing of the resource.

Resources assessment has long been conducted by the Federal Gov-

ernment as part of its stewardship responsibilities over offshore lands, but it has been criticized as not being adequate. To this extent, it is intended that the Government expand and accelerate its efforts in this area. However, any resource assessment to assist in exploration and development of the OCS for the benefit of the public under this Act, is not intended to be comparable to the extensive exploratory efforts, such as drilling, undertaken by industry in connection with the production from OCS tracts, pursuant to permits or leases.

The R&D work is not to be used as a substitute for private industry oil and gas production efforts but the R&D may be undertaken to better understand ways to develop the resources. It is to furnish the R&D to assist in private enterprise exploration. Again the Committee emphasizes that one of the bill's purposes is to supplement and not supplant private industry efforts.

The importance of this assessment is that an agency could then be prepared to perform, if necessary, R&D for such things as actual drill bit technology and the various geographic factors which affect the actual recovery of oil and gas such as the type of mud, its weight, its temperature and the sensing devices used. This would be appropriate not only to improve extraction technology but also to provide further improvements to reduce spill and environmental damage. This is true particularly for new areas such as the icy conditions that are now beginning to be encountered in Alaskan regions. It is intended that all Federal agencies, such as ERDA, become familiar with the Interior Department's leasing program.

4. Another amendment adds a new sentence at the end of section 7 of the bill to maintain the existing authority of the Interior Department to make public data obtained through its leasing program, as noted in a March 10, 1976 Interior Department press release entitled "Final Approval For Second Atlantic Shelf Test Hole". The release states:

> The USGS said that data and analytical results of the tests must be available for release to the public five years after the date of completion of the tests or 60 calendar days after the issuance of the first Federal lease within 50 geographic miles of the drilled site, whichever is earlier.

5. The last amendment adds new provisions to the reporting requirements (Sec. 9) of the bill. The new provisions require that Interior prepare a comprehensive program and plan as part of the report. It is intended that the plan be updated periodically. Full participation by the other Federal agencies referred to in the bill is expected. In addition, the Secretary is required to consult with other Federal agencies, the coastal States and affected local governments at an early stage. Public participation is also required, including public hearings with a transcript, prior to submission of the plan and program to Congress. The written comments of the public which includes the Federal agencies, the States, local governments, and others, shall be a part of the plan. Some of the elements expected to be covered in the plan are as follows:

(1) an assessment of the state-of-the-art and the state of practice in each area of research and development specified in the Act;

(2) an assessment of the then existing research and development by private industry in each area of research and development specified in the Act;

(3) an assessment of the then-existing research and development supported by the Federal Government under other authority which is related to the research and development specified in this Act;

(4) an assessment of existing procedures and technology which is not currently in use in OCS operations, but which may by technology transfer be effectively applied to achieve the research and development objectives specified in this Act;

(5) identification of specific research and development opportunities and strategies to achieve the objectives specified in this Act;

(6) funding estimates for the resulting research and development opportunities and strategies, as a function of varying schedules and budgets to achieve the objectives specified in the Act; and

(7) an analysis of the then-existing Federal OCS resource assessment activity and projected future activity using advanced technology.

One of the technical amendments adds a new section to the bill establishing a title of the bill.

VII. Agency Comments

In a November 13, 1975, letter to the Committee, the Interior Department recommended against enactment of H.R. 9724. The Department said that "aggregate action" with respect to the OCS "can be taken under existing law." ERDA and EPA had similar views.

As this report observes, the Interior Department's R. & D. program is funded at a very low level and it lacks specific R. & D. legislation for the OCS. Also there does not exist today an adequate mechanism for coordinating the R. & D. efforts of the various Federal agencies concerning the OCS.

The Interior letter asserted that H.R. 9724 would mandate a Federal exploration program. However, H.R. 11333, with the further, clarifying amendments recommended by Representative Goldwater and adopted by the Committee, removes all possible inference that the bill mandates such a program and this report of the Committee expressly states that it is not our intention to mandate such a program.

Interior's letter objected to the fact that H.R. 9724 required that the Secretary designate the Geological Survey to head the project established by the bill. However, H.R. 11333 does not require such a designation. Rather it gives the Secretary complete freedom to designate whatever agency within Interior he deems appropriate.

VIII. Section by Section Analysis and Discussion

Section 1

Section 1 declares that the purpose of the bill is to establish at the Federal level a vigorous and comprehensive research and development program concerning oil and gas resources of the OCS. The goals or purposes of the program are to increase the Government's knowledge of OCS resource data, assist in the development of new technology,

to insure that current and future exploration and development of the OCS is carried out in an environmentally and technologically sound and safe manner consistent with the need to conserve the resource and protect the public interest therein, help gain public support for the OCS exploration and development program, supplement, but not supplant, private industry's R&D efforts, encourage cooperative Federal-State and Federal-industry R&D, assist in the exploration of OCS oil and gas, and provide more information about such R&D to the States and the public.

Section 2 of the bill specifies that all of the activities carried out by Interior and all the other Federal agencies referred to in H.R. 11333 shall be done in accordance with, and in furtherance of, each of these purposes or goals. Thus, while the Committee frequently discussed in this report the importance of clause (d) of section 1, it is the Committee's intention that all of the clauses of that section receive equal attention by the Federal agencies in carrying out this program.

Section 2

Section 2 of the bill directs the Secretary of the Interior to establish an "Outer Continental Shelf Research, Development and Resource Assessment Project." This is to be done within 45 days after funds are appropriated for the project. The project covers all activities carried out under the bill. It also directs the Secretary to designate within 90 days after enactment the bureau or agency within Interior that will be coordinating this program and managing the project. This provision is intended to give the Secretary flexibility to designate the appropriate bureau or agency within Interior to run the program, and to change that designation later, if he deems it appropriate, without resorting to a statutory change. The section also requires that the Secretary or the appropriate Interior agency head enter into agreements with several named departments and agencies for them to conduct various aspects of the program.

Section 3

Section 3(a) of the bill defines Interior's role in carrying out the project. It would include the:

(1) assessment of oil and gas resources of the OCS on a continuing basis;

(2) conduct of research and studies with the aid of NOAA and the Fish and Wildlife Service into the environmental effects of developing OCS minerals and coastal States and communities and on natural resources and to study measures to minimize any adverse effects;

(3) conduct a research, development, and demonstration program concerning better methods, procedures and technology for predicting the existence of oil and gas and for establishing improved operations on, and regulations for, the OCS; and

(4) consult with coastal States and others concerning Project activities.

Section 3(b) authorizes Interior to purchase needed geological, geophysical, or other data with appropriated funds. But where the data are acquired by anyone pursuant to an exploration permit issued by Interior, such data should under the 1953 Act and regulations normally be available to Interior free. This is the approach adopted by

Secretarial notice of December 11, 1974 (39 F.R. 43562.) According to Interior, "This was the first notice to the public concerning the mandatory submittal and ultimate public disclosure of geological and geophysical data collected on the OCS under a Federal permit." The notice states:

> Upon request of the Supervisor, the data acquired under this permit and the processed information derived therefrom after it has been processed for the permittee's own use or for delivery to any third party shall be submitted to the Supervisor within 30 days after request. Processed information is data in analog or digital format, the form of which has, in order to facilitate interpretation, been changed through processing operations including, but not limited to, the application of corrections for known perturbing causes, the rearrangement of the data, filtration to remove erroneous signals and interference, and the combination and transformation of data elements. *The intent of this provision is to obtain for the United States without cost the information which the permittee processes for his own use or supplies to third parties.* It is not intended to require the permittee to supply interpreted, as distinguished from processed, information. (Italic supplied).

The Subcommittee hearings indicated that Interior recently revised its permit regulations to insure that such important data would be available to it in a timely fashion. Interior has indicated (Hearings, p. 837) that at some future time it may want to change its regulations to provide for payment of some of these data and possibly on a retroactive basis. This section would require an authorization by Congress for this change in policy and payment, as such payments could be very costly.

Section 4

Section 4 of the bill recognizes that the Energy Research and Development Administration currently has authority to conduct an R&D program concerning the OCS, particularly in the area of prevention and cleanup of marine oil spills. It directs ERDA to use this authority in carrying out an RD&D program concerning the recovery of OCS oil and gas in deep waters and under hazardous natural conditions and in a safe and environmentally sound manner.

Section 5

Section 5 directs the Commerce Department in cooperation with other agencies to conduct an R.D. & D. program regarding underwater diving techniques and equipment used or to be used in connection with OCS operations. The objective of such research is to improve diver safety and equipment and eliminate deaths in connection with such operations.

Section 6

Section 6 of the bill directs the Coast Guard, ERDA, and the Environmental Protection Agency to conduct a program of prevention, containment, removal and cleanup of oil spills occurring from OCS operations.

Section 7

Section 7 authorizes all of these agencies to carry out this work by contract or grant. The Committee wants to stress that we expect that the head of each agency referred to in this bill will promptly establish a policy and procedure for insuring that small business concerns are given a reasonable opportunity to participate fairly and equitably in such contracts and grants, and in carrying out this policy and procedure that they will consult with the Administrator of the Small Business Administration.

In addition, it provides for disclosure of information obtained. But at the same time it provides a procedure whereby trade secrets or other proprietary information shall not be disclosed. However, the section also provides that where a shorter-period for retaining any data confidential is prescribed in an OCS lease, permit, regulation, or other agreement that period will apply. This procedure is similar to one adopted by the Congress in Public Law 94–187. Decisions concerning the disclosure and non-disclosure of such information are subject to judicial review.

Section 8

Section 8 requires that apropriations made under the Act are subject to annual authorization and does not set up a funding authorization figure.

Section 9

Section 9 provides for an annual report to the Congress by the Secretary of the Interior on the research and development activities for the preceeding calendar year and a comprehensive plan and program. It is the intention of the Committee that this report be detailed and comprehensive and would include, for example, the agreements reached between agencies to carry out the project.

Section 10

Section 10 requires that the agencies keep our Committee fully and currently informed about the activities authorized under the bill, including data concerning budget requests and other matters

Section 11

Section 11 sets forth the title of the Act.

IX. Cost of the Legislation

The bill as reported does not contain an authorization amount. The purpose of the bill is to provide a framework within the Federal Government to conduct and coordinate R. & D. on the Outer Continental Shelf. The hearings and the work of the Committee were directed toward this objective. Therefore, a specific estimate on the costs incurred in carrying out the program was not addressed because of the requirement that the program, once implemented, be annually authorized.

X. Effect of Legislation on Inflation

In accordance with Rule XI, Clause 2 (l)(4) of the Rules of the House of Representatives this legislation is assessed to have no adverse inflationary effect on prices and costs in the operation of the national economy. The Committee takes the position that OCS R. & D. will offer a very positive benefit to the nation in a sound program for acceleration of the recovery of needed oil and gas reserves.

XI. Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, no changes in existing law are made by the bill.

XII. Oversight Findings and Recommendation

Pursuant to clause 2(1)(3), rule XI, and under the authority of rule X, clause 2(b)(1) and clause (3)(f), of the Rules of the House of Representatives the oversight findings and recommendations are contained in this report on H.R. 11333.

Since 1971 the Geological Survey and the Office of Pipeline Safety of the Department of Transportation have been periodically meeting and corresponding in trying to reach a decision as to which agency should monitor the thousands of miles of pipelines that traverse the OCS. In an October 1, 1974 report (H. Rept. 93–1396), the House Committee of Government Operations discussed extensively this jurisdictional dispute between agencies. The Report states (p. 54):

> The committee understands that while this jurisdictional dispute is unresolved neither the Survey, the BLM, nor the OPS has been inspecting or regulating the pipelines. Every day of delay in performing such inspections and promulgating such regulations increases the possibility of other serious pipeline breaks which might be prevented if either the GS or the OPS monitored and inspected the pipelines. * * *

The committee therefore recommends as follows:

> The Geological Survey should promptly resolve its jurisdictional dispute with the Office of Pipeline Safety of the Department of Transportation and reach agreement on which agency will for purposes of safety regulate the design, construction, and maintenance of, and inspect, pipelines within the Outer Continental Shelf, or submit the jurisdictional issue to the Attorney General for prompt resolution.

At the July 1975 hearings by the Committee's Subcommittee on Energy Research, Development and Demonstration (Fossil Fuels), Rep. Robert (Bob) Krueger and other members questioned the Interior Department and the Office of Pipeline Safety about the long delay in resolving this dispute. Both witnesses responded optimistically that this dispute could be resolved in the Fall of 1975. However, the Committee observes that as of March 29, 1976, the dispute still has not

been resolved, although we understand that a draft agreement is being prepared. The Committee cannot understand why two agencies still cannot reach agreement in this important matter after almost 5 years.

XIII. Congressional Budget Act Information

No information pursuant to section 308(a) of the Congressional Budget Act of 1974 has been provided to the committee by the Congressional Budget Office. No funds for State or local financial assistance are included in H.R. 11333.

XIV. New Budget Authority and Tax Expenditures

The bill as reported does not contain new budget authority or tax expenditures for a fiscal year as set forth in Sec. 308(a) of the Congressional Budget Act of 1974. The bill requires an annual authorization for the program under Sec. 8.

Appendix A

Bills introduced early in this Congress to amend the Outer Continental Shelf Lands Act of 1953:

(1) H.R. 2772—introduced by Mr. Bingham.
(2) H.R. 2892—introduced by Mr. Howard.
(3) H.R. 3638—introduced by Mr. Forsythe.
(4) H.R. 3808—introduced by Mr. Studds.
(5) H.R. 4112—introduced by Mr. Yates.
(6) H.R. 4301—introduced by Mr. Forsythe, Mr. du Pont, and Mr. Roe.
(7) H.R. 4518—introduced by Mr. Howard and Mr. Maguire.
(8) H.R. 4750—introduced by Mr. Conte.
(9) H.R. 5043—introduced by Mr. Downey.
(10) H.R. 5917—introduced by Mr. Forsythe, Mr. Lent, and Mr. McCloskey.
(11) H.R. 6256—introduced by Mr. Studds, Mr. Beard of Rhode Island, Mr. Bedell, Mr. Drinan, Mr. Edgar, Mr. Edwards of California, Mr. Harrington, Mr. Hicks, Mr. Krebs, Mr. Leggett, Mr. Mitchell of Maryland, Mr. Ottinger, Mr. Pattison of New York, Mrs. Spellman, and Mr. Stark.
(12) H.R. 8691—introduced by Mr. Studds and Ms. Holtzman.

INDIVIDUAL VIEWS OF HON. BARRY M. GOLDWATER, JR.

SUMMARY

While I voted for this legislation as it was reported from the full Committee, I did so with deep misgivings and concern for several of its provisions that were not amended during final committee consideration.

My support for the legislation grows from the adoption of several amendments which clarified the Federal Outer Continental Shelf (OCS) R&D role. These amendments, several of which I offered after they were developed through the cooperative efforts of myself, Subcommittee Chairman Ken Hechler and Subcommittee Member Robert Krueger, clarify the point that the Federal activities conducted under the bill are not requirements or permission for the government to get into OCS production. Other amendments require a comprehensive OCS R&D plan and program and make it crystal clear that any Federal OCS activity carried out under this legislation is to be of supplementary nature to industry only.

I am still greatly concerned about Section 4 of the bill. As currently written it could be interpreted by future readers to require an unjustified, unnecessary, and extremely costly Federal R&D program by ERDA in OCS oil and gas production technology, and possibly Federal oil and gas production. This possibility exists in part because Section 4 may be taken as existing independently of other more qualified sections of the bill and because of ambivalence in the meaning of some of the section's language. ERDA has its hands full with several other major programs. This provision could well serve to distract ERDA's attention and dilute existing efforts. I am disturbed that the section could not be clarified and tightened up by amendment and urge my colleagues to examine it closely.

DISCUSSION

The committee report and associated hearing record document the current existence of a fragmented and modest Federal effort of OCS R&D across the spectrum of Federal OCS responsibilities and activities. I do not believe that H.R. 11333 grants any major new authority for such R&D. The bill generally draws on agencies with ongoing programs under existing authorization. Rather, the bill provides for coordination of these various R&D efforts, and obviously is framed to provide a legislative vehicle for more focused oversight and increased emphasis through annual authorizations. The increased emphasis probably will lead to pressure for increased funding of these programs, as the Committee's report already suggests. Those pressures and supporting justifications can be considered most appropriately in the annual authorization process, so I will withhold any further comment on

them at this time. To this extent, I have deferred to the judgment of the Subcommittee with regard to the objectives and the statutory scheme of the bill. As the Representative of a district which has seen the results of an OCS accident, albeit one of the relatively few major incidents in the history of our OCS development, I also am interested in an effective and coordinated Federal OCS R&D program when necessary to support the safe and environmentally responsible development of this important national resource. I make this statement of support with the firm knowledge, and lack of hearing record to the contrary, that mere absence of OCS R&D activity in a given area is not by definition a demonstration of incapacity or reluctance by private enterprise.

H.R. 11333, however, in addtion to the statutory scheme to satisfy the aforementioned objectives, contains a series of specifically mandated or required Federal activities, as opposed to the discretionary authority for the activities which exists under current law. I was greatly concerned about two of these required activities in the Subcommittee-reported bill, OCS "resource assessment" by the Interior Department, and R&D by the Energy Research and Development Administration (ERDA) in deep water and hazardous condition production technology. Both of these required activities could potentially result in Federal encroachment into the legitimate sphere of private enterprise. In fairness, the Subcommittee report disavowed any intention for some of the negative potential I foresaw in these requirements, but I was convinced that the negative potential remained on the face of the statute. I also disagreed with certain of the supporting Subcommittee findings for those specific activities.

I also was greatly concerned that the bill did not include an express requirement for a comprehensive plan and program, particularly in light of the required activities, which could serve as a focus for future debate on the appropriate Federal role in each such activity and, at a minimum would provide notice to the public of Federal intentions. The plan and program, thereby, constitutes at least a notice or informational safeguard and potentially is a mechanism for a legislative oversight safeguard.

With the very able and cooperative assistance of Subcommittee Chairman Ken Hechler and Subcommittee Member Bob Kreuger, a series of compromise amendments were developed and adopted in Full Committee which addressed most, but not all, of my concerns. Specifically, the "resource assessment" requirements in Section 3(a) of the bill was amended to drop any reference to assessments of "commercial quantities"; to add a phrase emphasizing the informational aspect of the requirement, as opposed to exploration directly supporting production; and to expressly indicate that the current analysis of data obtained from commercial lessees and permittees is considered as a legitimate and acceptable form of "resource assessment".

It is particularly important to note that the Department of Interior advised me that the language in the Subcommittee's section 3(a) would require a Federal exploration program for the purposes of production which the Department strongly opposed in its letter to Chairman Teague of November 13, 1975. I generally support the positions in the letter. A copy of the Interior Department letter is appended to this discussion.

Also, it is apparent that this very controversial and complex issue is being fully considered in the Ad Hoc Select Committee on the OCS

I believe this bill should not "end run" that consideration in any way. I am convinced that the compromise amendments satisfy my concerns with Section 3(a) and are tantamonut to a proviso, "that this section does not *require* the Secretary to conduct a Federal exploration program for the purposes of production."

The second major concern that has been satisfied in the amended bill is the need for a comprehensive OCS plan and program for the activities under the bill. Again, in fairness, the Subcommittee took a step in this direction with its annual report requirements in Section 9, but I concluded that we should go all the way, and require a plan and program. As mentioned earlier, such a plan and program can serve the necessary purpose of giving notice to all the public, including, particularly the private sector and the states, of the Federal intentions for implementation of the bill. Once notice is given, the plan and program can serve as an appropriate legislative vehicle for focusing on the issues raised by those intentions.

That result has certainly been this Committee's recent experience with the Solar Heating and Cooling Plan, the Geothermal Program Definition and the National Energy R&D Plan. In each case, our own review and the public's was ably augmented by reviews of the Congressional Research Service and the Office of Technology Assessment. The Committee Report adds several elements to the statutory requirements for the plan. I would add to these the following, which I hope the Interior Department would carefully consider and include:

(1) the organizational structure of the project including: (A) specific delineations of responsibility of each participating Federal agency in the conduct of project activity; (B) mechanisms established to coordinate research and development, where more than one agency is involved; (C) review and management procedures at the secretary and agency administrator levels; (D) advisory mechanisms and procedures for review of and comment on project activities by state and local governments, private industry and public interest groups; (E) procedures for public dissemination of information resulting from the project, consistent with Section 70; and (F) the status of any memoranda of understanding or other agreements required to implement the project.

(2) identification based on subsection (8) of any additional Federal assessment activity authorized by Section 3(a)(1), which might be undertaken to achieve the objectives specified in this Act;

(3) funding estimates for the additional activity identified in subsection (9), as a function of varying schedules and budgets to achieve the objectives specified in this Act;

(4) Cost-benefit analyses of the research and development opportunities and strategies and additional assessment activities based on subsections (7) and (10) respectively;

(5) procedures for assuring international cooperation in outer continental shelf research and development and resource assessment, consistent with continuation of the existing leadership of American industry in outer continental shelf technology;

(6) a program for analysis of institutional barriers to private research and development and technology transfer in the OCS and for consideration of regulatory reforms to increase private sector research and development and technology transfer;

(7) a comprehensive and integrated plan for implementation of the resulting recommended program of Federal research and development and resource assessment to achieve the objectives specified in this Act;

I would conclude that the comprehensive plan and program is of utmost importance generally, and specifically in light of the concerns in the resource assessment and production technology R&D areas.

Finally, and *most importantly*, Section 4 of the report could be read as requiring ERDA to engage in R&D on OCS production technology. While a limitation regarding "supplementing but not supplanting" industry R&D has been expressly applied in the statute as a result of the compromise amendments, I am still greatly concerned about the negative potential that ERDA will be unjustifiably and unnecessarily required to engage in R&D on production technologies. Let me explain in some detail what that concern is.

Section 4 mandates in ERDA a research and development demonstration program "to expedite the development of effective and safe technologies for (1) recovering Outer Continental Shelf oil and gas in deep waters and under hazardous natural conditions and (2) otherwise enhancing the recovery of such minerals in a safe and environmentally sound manner."

Amended section 2, applies to all the activities under the bill the provisions of section 1, including amended subsection (d), "supplement, but not supplant, research and development efforts by private enterprise." The amendment to sub-section 1(d) struck the word "present" in the phrase "present research and development efforts by private enterprise" in the subcommittee bill, while the amendment to Section 2 expressly defines the activities under the bill and applies section 1 to each of them. Again, in fairness, the Subcommittee addressed this problem, but I concluded that direct statutory limitation was essential.

These amendments make clear in the statute that all mandated Federal R&D activities are to be conducted in a manner which supports both our existing and our future private sector R&D efforts, rather than displace those efforts with government programs.

The strict application of the "supplement, not supplant" limitation, although important for all the mandated Federal activities, is most critical in any future ERDA response to the direction of Section 4.

But, and this is the thrust of my serious concern, there are many things which industry is not and probably will not do or will do a different way in OCS production technology. That alone simply does not provide, ipso facto, the justification for ERDA to undertake an R&D program on a specific system or approach. And, that rationale is even more troubling when one considers the large number of approaches and systems already under consideration in industry for deeper water and hazardous conditions. Since there is no definition of these latter terms, and since it is apparent that many if these systems and approaches probably will be legitimately rejected and discarded by industry, there arguably could be a whole series of R&D efforts which ERDA could be required to include in its section 4 program. Even worse, it is even conceivable that an ERDA developed system, although rejected by industry in concept formulation or later in the development cycle as unacceptable, could subsequently be imposed by OCS lease regulation on the industry.

These concerns are best illustrated by the "shopping list" of R&D which is cited in the Committee Report, in Section IV, as justification for Section 4. The list is taken from a quick 60-day survey of potential Federal OCS R&D efforts by an ERDA contractor. Item (5) on the list is "Submarine tanker system and submerged Arctic port facility." Many of us remember the days when the sub tanker concept was in vogue as an alternative to the SS Manhattan approach and the Trans-Alaska Pipeline to bringing North Slope oil south. After the apparent failure of the S.S. Manhattan, in fact, there was even considerable press attention to the concept.

And, now, it is being resurrected as a *potentially legitimate* focus of ERDA's R&D efforts under Section 4. That may sound facetious, but it is in the report. I do not need to repeat the cost, manpower training, capital, materials problems, etc, which plagued the concept and because of which industry hasn't and is not likely to adopt it. Facetious or not, this one example points up the very real dangers of putting ERDA in the OCS production and related technology business.

I am not alone in concluding that ERDA and the Federal Government shouldn't be in that business. In fact, most of the authoritative studies have concluded that the Federal Government should only do such R&D as is necessary to establish an independent technology input for improved OCS regulations and orders. That really was the thrust of the testimony in the subcommittee hearings. Let me quote from them on Friday, July 11, 1975 at pages 709, 710, 724 and 725.

> Mrs. LLOYD. Thank you very much, Mr. Chairman.
>
> We certainly appreciate the appearance of all of you here today and your wisdom and your interest.
>
> Ms. Heller, on page 4 you referred to Government research into safety technology. Also, at the end of the paragraph you said that it should not be substitute for appropriate industry R. & D. Do you suppose a correlation of these two? Or what is the impact of this and would not the cost of this duplicative research be prohibitive at this level?
>
> Ms. HELLER. (Testify on behalf of Friends of the Earth, Sierra Club, Environmental Policy Center) I am not suggesting duplicative research. I had hoped I made that clear. I think we have to draw a line and the Government should not be subsidizing industry research into hardware. The only thing Government should be involved in is research and development on safety, environmental and human worker safety technology. The research and development leading to more efficient and profitable production for the companies should be left to the companies. They have, traditionally, been very good at that.
>
> It is the areas where they do not get a bigger return for their research and development, which includes safety technology, in which the Government should get involved.
>
> * * * * *
>
> Mr. HECHLER. I must say that we would certainly be pleased to receive any preliminary information on some of these reports. We are at a policymaking time in terms of coal leasing, for example, which would make it extremely valuable to have the recommendations and analysis as soon as possible, even in a preliminary way from GAO.

Finally, Mr. Chairman, I would like to ask the reaction of yourself and Dr. Kash to the suggestion that Ms. Heller made concerning responsibility for environment and safety R. & D. as against production R. & D.—would that be a proper division?

Mr. CANFIELD. (Director of Office of Special Programs, G.A.O.) We do not have within GAO at this time, a formal position. Let me express some general observations on the problem. A definition of what constitutes R. & D. is critical. To the extent that the R. & D. is essentially software kinds of stuff which Dr. Kash testified on, you may well want to put it in one place; and to the extent it is hardware, you may want to put it in another. Hardware work is traditionally done by industry, and to the extent that industry is not doing it, the Interior Department has traditionally done it.

Environmental assessments and safety assessments probably ought to be somewhere other than in the agency responsible for the actual regulations.

In any case, the only posture I would be prepared to take explicitly at this time is that whatever research and development is done, it must be coordinated with the overall R. & D. program which ERDA is developing.

Wherever you put it—I have a strong predilection myself for separating research and development from the regulatory function, and I always have. So I would not give that function to the Interior Department in most instances because I do not think you can do a good job of regulating while you are also leasing, producing, and doing research. These are personal observations. The GAO does not have a policy as an institution on this.

Mr. HECHLER. I must say that I was rather disturbed by some of the witnesses which came before the comittee, both from industry and Department of the Interior, who took a very strong position that the lead and pacing of all research and development should be taken by industry and that the free market economy would automatically produce the best results in terms of filling the gaps. This disturbed me a great deal because I do not think the Federal Government should abdicate its responsibility in areas where the Nation desperately needs this research.

Any reactions?

Mr. CANFIELD. My own assessment is that the industry has done an exceedingly good job as to certain kinds of hardware research and development which have implication in terms of payoff for corporate entities. As long as you can develop a fairly direct relationship of a potential payoff for corporate entities, this is so; and also in situations where private industry has been given explicit instructions as to certain criteria to be met in areas such as safety, and knows that the Government actually intends to use teeth and enforce it, that kind of R. & D. is effectively done by industry.

It is wrong to assume that industry will do R. & D. on broad and general problems where there is no way in which an individual corporation can capture the benefits, but the

public as a whole captures them. It is wrong to assume that private industry can do that; they have no incentive to do it. It does not do the stockholders of the corporation any good, and you have to turn to the public to do the public business. I think as long as we distinguish those things, we will have a public R. & D. program and a private one, and they should be complementary.

My discussions with representatives of all segments of the OCS industry clearly indicate that industry is moving rapidly to prepare for deep water OCS development. Senior managements of four different service firms have related their activities to prepare for 4,000 feet, 6,000 feet and even as deep as 10,000 feet. The latter, of course, is in the early conceptual stages. The simple point is that there is an economic incentive to produce OCS oil and produce it well. Industry is and will respond.

The views of the above witnesses and my discussions are supported by the following Office of Technology Assessment comments in the October 1975 report, "An Analysis of the ERDA Plan and Program." The italicized paragraph is most important in considering the Committee report discussion on the need for section 4 in section IV of the report. The comments appear at pages 54 and 55.

2. Primary Oil and Gas Recovery

ISSUE

No Federal agency is engaged in a comprehensive research program for primary oil and gas recovery from new sources; the absence of such a program could lead to delays in the development of these resources.

SUMMARY

Exploration and development of oil and gas from new sources, particularly the Outer Continental Shelf, continues to be severely delayed by the lack of planning on the part of the Federal Government. An aggressive ERDA research program would complement industrial efforts. In particular, research is needed on the effects of offshore drilling on ways of mitigating those which are harmful to the environment. Congress mandated in Public Law 93-577 Sec. 6(b)(3)(Q) that ERDA engage in a program to explore methods for the prevention and cleanup of marine oil spills, but the scope of ERDA's proposed activities is not clear.

QUESTIONS

1. What is ERDA's current schedule for development of the congressionally mandated program on methods for the prevention and cleanup of marine oil spills?

2. What current studies of regional, social, and economic impacts of Outer Continental Shelf (OCS) exploitation is ERDA performing (or monitoring if being performed by other agencies)?

3. What are ERDA's plans for development of a coherent information base to assist potentially impacted areas in coastal zone planning for OCS oil and gas development?

4. What studies are underway at ERDA or in other agencies with which ERDA is cooperating on alternative OCS oil and gas lease management arrangements and compensation provisions in the event of adverse impacts on areas of OCS oil and gas development?

5. How soon does ERDA anticipate having a comprehensive data base on site-specific environmental conditions of potential OCS lease areas? If the regional data are to be assembled by an agency other than ERDA, what is ERDA's current role in defining the nature and extent of information to be acquired and the time schedule for the program?

BACKGROUND

There are three sources of large quantities of liquid and pipeline gas fuels from domestic resources in the near-term (to 1985): production of oil and gas from the onshore lower 48 States, offshore sites, and Alaska. Estimates of petroleum resources on the OCS (to a water depth of 200 meters) range between 10 and 130 billion barrels (20–50 percent of U.S. resources); OCS natural gas resources are estimated at greater than 100 trillion cubic feet (20–30 percent of U.S. resources). Most of the present production is taking place in the Gulf of Mexico, but there are also sources of oil and gas off the Pacific coast, the Atlantic coast, and the coast of Alaska. Although development in some of the promising areas would be hampered by sever environments, there are no serious technologic obstacles to extracting oil and gas. The basic technology has been well-tested in the Gulf of Mexico, the North Sea, and elsewhere.

The expansion of offshore production to increase domestic fuel supplies has recently been very slow, mainly because of environmental and institutional obstacles. In particular, the problem stems from an inability to lease promising development sites because of public opposition due to uncertainties about environmental and social impacts.

One way to remove development delays is to reduce the likelihood of environmental damage from oil spills by developing better blowout prevention and cleanup technology. In the long run, this would reduce uncertainty and should help to avoid delays in opening up new areas for production. In the short run, and especially over the next several years, other Federal activities are needed as well. Research requirements include the following:

Geological information on new potential oil and gas resource regions.

Site-specific studies of environmental conditions well in advance of lease sales.

Research on the prevention and consequences of oil spills.

Studies of the regional social and economic impacts of OCS exploitation and possible frameworks for compensation for adverse impacts.

Support of coastal zone planning.

Development of alternative lease management arrangements.

The Congress directed ERDA to engage in a program to investigate methods for the prevention and cleanup of marine oil spills. (Public Law 93-577, Sec. 6(b)(3)(Q)), but it is not clear how much of an effort is proposed as part of the Environmental Control Technology program of ERDA—the only place in the ERDA Plan where oil-spill cleanup is treated.

Similar conclusions are contained in all of the major studies which have reviewed OCS operations since the Santa Barbara channel incident. Those studies include the following:

1. National Aeronautics and Space Administration, "Applicability of NASA Contract Quality Management and Failure Mode Effects Analysis Procedures to the USGS Outer Continental Shelf Oil and Gas Lease Management Program," November 1971.
2. United States Geological Survey, "Outer Continental Shelf Lease Management Study," May 1972.
3. National Academy of Engineering, "Outer Continental Shelf Resource Development Safety: A Review of Technology and Regulation for the Systematic Minimization of Environmental Intrusion from Petroleum Products," December 1972.
4. University of Oklahoma, "Energy Under the Oceans, A Technology Assessment of Outer Continental Shelf Oil and Gas Operations," November 1973.
5. Council on Environmental Quality, "OCS Oil and Gas—An Environmental Assessment," April 1974.
6. United States Geological Survey, "Report of the Work Group on OCS Safety and Pollution Control," May 1973; with Supplement No. 1, May 1973; and Supplement No. 2, November 1974; and Supplement No. 3.
7. National Academy of Engineering, "Report of the Review Committee on Safety of Outer Continental Shelf Petroleum Operations to the United States Geological Survey," First Report: January 1974; Second Report: June 1974; Third Report: March 1975.

All of these various conclusions seem to coalesce to support exactly the type of R&D which is contained in Section 3(a)(3) of this bill,":

(3) conduct a research, development, demonstration program concerning better methods, procedures, and technology for (A) predicting the existence of oil and gas resources of the Outer Continental Shelf and (B) establishing improved regulations and orders governing Outer Continental Shelf operations, including but limited to, the development of performance standards and failure detection devices and systems concerning equipment and associated pipelines used in such operations;

I have not concluded that the current procedures in the Department of Interior, which involve a form of consensus standards, is still not the right way to proceed. But, for now, I will defer to the judgment of the Subcommittee as expressed in Section 3(a)(3). That is an issue which can best be addressed in the continued oversight which this bill would provide.

But, I repeat, I can find no justification for the Section 4 mandate of a major new program. I would conclude by stating that I believe the bill should include the following limitation to Section 4.

> Provided that this section does not authorize nor require the Administrator of ERDA to conduct a research, development and demonstration program in primary production technology for the Outer Continental Shelf, except such limited research, development and demonstration as is necessary to support the regulatory responsibilities of the Federal Government for Outer Continental Shelf oil and gas production under any other law, including, but not limited to, the areas of environmental protection, safety, and occupational safety and health.

BARRY M. GOLDWATER, Jr.

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., November 13, 1975.

Hon. OLIN E. TEAGUE,
Chairman, Committee on Science and Technology,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This responds to your request for the views of this Department on H.R. 9724, a bill "To authorize a program of energy research, development, and demonstration to assist in the exploration and development of oil and gas on the Outer Continental Shelf, and for other purposes."

We strongly recommend that H.R. 9724 not be enacted because appropriate action with respect to Outer Continental Shelf energy resources can be taken under existing law and because we do not believe that H.R. 9724 adds significantly to existing OCS authorizations and programs. H.R. 9724 could lead to further delay of the OCS development program without additional benefits.

H.R. 9724 would establish within the Department of the Interior an Outer Continental Shelf Research, Development, and Resource Assessment Project, as a supplemental program to:

(1) Assess, by mandating a Federal exploration program, oil and gas resources of the OCS on a continuing basis;

(2) Conduct research and studies into the environmental effects of developing OCS minerals on coastal States and communities and on natural resources and to study measures to minmize any adverse effects;

(3) Conduct a research, development, and demonstration program concerning better methods, procedures and technology for predicting the existence of oil and gas and for establishing improved operations on the OCS; and

(4) Consult with coastal States and other concerning Project activities.

Overall management of the Project would be carried out by the Secretary of the Interior through the Director of the Geological Survey, both with authority to enter into working arrangements and agreements with other Federal agencies.

H.R. 9724 would also direct:

—The Administrator of the Energy Research and Development Administration, with others, to conduct a research, development and demonstration program, in accordance with the Federal Nonnuclear Energy Research and Development Act of 1974, to expedite the development of environmentally safe technologies for recovering OCS oil and gas in deep waters and under hazardous natural conditions;

—The Secretary of Commerce, with others, to conduct a research, development, and demonstration program to improve safety and capability of underwater diving techniques used in OCS development;

—The Secretary of the Department in which the Coast Guard is operating, with others, to conduct a research, development, demonstration, and training program concerning the prevention, containment, and removal of OCS oil spills.

H.R. 9724 would require all scietific, technical, and resource information, acquired pursuant to H.R. 9724 or pursuant to any authorization to conduct OCS exploratory work under any other law, be made available to the States and to the public unless the appropriate Federal agency head finds that such information would divulge trade secrets or other proprietary information. Such information could not, however, be kept confidential from other Federal agencies or from the Congress.

H.R. 9724 would also require the Secretary of the Interior to provide the Congress with an annual report specifying the efforts, actions, and costs of implementing H.R. 9724 and an assessment of the state-of-the-art technology and the resources of the OCS. H.R. 9724 also mandates that the appropriate Federal agencies also keep the Science and Technology Committee of the House of Representatives and the Interior and Insular Affairs Committee of the Senate and the Appropriations Committees of the Congress fully and currently informed.

FEDERAL ROLE IN EXPLORATION

H.R. 9724 mandates a Federal exploration program. The Department is opposed to such a program.

We do not believe the Federal Government should be involved in the exploratory phase of oil and gas development. The Department has carefully considered this issue, and we have concluded that the claimed benefits are either small, as in the case of better information, or they may be obtained without resorting to Government exploration, as in the case of increased public control over development. Moreover, we see costs totaling billions of dollars for Government exploration to locate the existence of commercial quantities, which would be measured in terms of delay in discovering oil and gas, or even in failure to discover oil and gas.

The benefits of better OCS information are relatively small, in our judgment, the extensive Project Independence Report already provides a great deal of information about the alternative we have for increasing domestic energy production. Notably, the Report indicates that the OCS is one of the most significant potential sources of increased oil production, and that oil from the OCS is relatively cheap

compared to oil from non-conventional sources and secondary and tertiary recovery. The implication of the Project Independence is that we should in any case go ahead with OCS development, but that we should not further delay development while we obtain still more information.

RELATION TO OCS MANAGEMENT AND DEVELOPMENT PROGRAMS

The programs which are outlined in H.R. 9724 appear to exist independently of present or future OCS management and development programs. Nothing in H.R. 9724 appears to integrate or assure coordination of the provisions with present OCS procedures and timeframes or indicates the relationship of its provisions to existing authority and laws. In this respect, we strongly object to H.R. 9724 as a parallel, not a supplemental, program duplicative of our current efforts, with great potential for the creation of confusion, delay and waste.

DENOMINATION OF INTRA-AGENCY RESPONSIBILITY

H.R. 9724 names several intra-agency divisions to perform specific functions under its provisions, regardless of such intra-agency division's current role or function in the ongoing OCS program. We believe that this specificity is unnecessary and that it would encumber present administrative flexibility and result in wasteful duplication.

RESOURCE ASSESSMENTS

H.R. 8724 would require the Department, through the Outer Continental Shelf Research, Development, and Resource Assessment Project, to assess OCS oil and gas resources on a continuing basis.

The Department supports the idea of insuring adequate pre-lease exploration of the Outer Continental Shelf; it does not, however, believe that it is a proper use of Government funds to engage in large scale and expensive exploration of oil and gas in cases where private industry would be willing to bear the cost.

Stratigraphic drilling presently provides the best, although by no means a certain, method for assessing OCS oil and gas potential. The regulations currently in effect for granting permits for deep stratigraphic drilling require advertisement and provision for participation by all interested parties on a cost sharing basis. Late participation is provided upon payment of costs plus a penalty. The information is therefore available to all willing to pay their proportionate share of the costs. With respect to further disclosure of this data, under existing authority, the Government receives it at no cost and is able to make it publicly available within 5 years or 60 days after a lease sale of the drill site, whichever comes first.

We are opposed to statutory establishment of such an assessment program.

ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS ASSESSMENT

We recognize that there are environmental and socio-economic impacts associated with OCS development and have taken steps to mitigate any adverse effects.

The National Environmental Policy Act requires the Interior Department to insure that environmental considerations are fully taken into account in implementing the OCS Lands Act.

As part of our analysis of frontier OCS areas, an extensive program of environmental studies has been initiated. The first phase occurs before leasing takes place. It involves an assessment of the biologic, physical, meteorologic and geologic conditions of an area. The establishment of this benchmark of oceanographic conditions permits us to measure any effects resulting from offshore development later. It also aids us in the preparation of environmental impact statements, in the selection of tracts and in the development of lease stipulations and criteria.

Once exploration and development takes place, an environmental monitoring program is begun. This program involves the analysis of the same variables included in the initial benchmark phase. Changes in the environment are detected and, where necessary, corrective measures are promptly developed.

In addition to the benchmark and monitoring phases, special studies such as spill trajectories, toxicity and socio-economic analyses, are also conducted.

The funding for fiscal year 1975 equals $20.5 million; proposed funding for fiscal year 1976 equals $44.7 million. This program is coordinated through an Outer Continental Research Management Advisory Board which consists of representatives from the coastal States, EPA, NOAA, and agencies within the Department of the Interior.

We are also doing environmental impact statements on the entire accelerated leasing program and on each specific lease offering. We are conducting baseline studies in all frontier areas.

Provisions modifying existing procedures are unnecessary and might be detrimental if transitional problems of complying with their provisions delay current studies or other actions we are currently undertaking to improve environmental protection and other requirements.

STATE CONSULTATION

Provisions exist for the States to participate in the leasing process at several points. Presently, the States play an important part in the process at the time of design and conduct of studies, tract selection, preparation of environmental impact statements, public hearings, applications for pipeline right-of-ways and location of onshore facilities. To provide additional coastal State participation in the decisionmaking process, representatives of the coastal States and the Department of the Interior and other Federal agencies agreed on May 21 of this year to establish an OCS policy advisory board. This board will provide a formal mechanism for policy discussion between the Federal Government and the States and another opportunity for the States to make recommendations. We see the establishment of this board as a significant step forward in working with the States on national and regional issues associated with OCS development.

SAFETY

Adequate safety standards and enforcement procedure for the OCS are currently in operation or are in the process of being put into force. We are committed to having standards at least as strict (assuming reasonable standards) as those of adjacent States. Studies have been conducted in cooperation with the National Academy of Engineering and the National Aeronautics and Space Administration, and steps

have been taken to implement the recommendations for safety of OCS operations. Proposed OCS Orders have been published for the Gulf of Alaska and the mid-Atlantic to elicit specific comments from interested parties. Also, the inspection staff has been increased from 12 in FY 1969 to 126 in FY 1975.

It should also be noted, that on July 9, 1975, the President sent to Congress a comprehensive oilspill liability bill (H.R. 9294). That bill was developed through extensive study, drafting, and review by an inter-agency task force over a period covering many months. It is designed to replace a patchwork of overlapping and sometimes conflicting Federal and State laws. It would pre-empt State laws and would apply a uniform nationwide system of compensation and liability for oil spill damages. It would specify and define liability, recoverable damages, and potential claimants. It would assure that virtually no damages or claimants would be uncompensated. It would provide an efficient means for payment of claims whereby claimants could avoid the costs, hassles, and delays of litigation. It is hoped that this bill will be quickly considered and enacted.

DATA DISCLOSURE

Assuring that the private sector has access to information needed to make intelligent decisions with respect to OCS energy resources is essential. Equally important is the desirability of maintaining a resource information base which allows the Government adequate knowledge of the quality and extent of the resources available for sale.

The Interior Department presently has the necessary authority and capability to pursue these objectives.

The U.S. Geological Survey has access under the present OCS Lands Act to the same geophysical data as lease bidders, and has the means for gathering substantially more offshore data than bidders.

To provide a better government information base and for the more rapid disclosure of exploratory data, new geological and geophysical regulations were published in the Federal Register on April 24, 1975. Comments on the proposed regulations were due on June 20, 1975. Final rulemaking is expected shortly. The proposed disclosure provisions will hopefully help minimize competitive disadvantages by making more data widely available in time, and will increase Geological Survey's immediate access to industry data for evaluation of tracts under consideration for leasing.

In summary, we believe that H.R. 9724 is not supplemental but duplicative of existing OCS programs and activities, and that it could delay OCS development due to otherwise unnecessary reorganization, and probable dilution of manpower and funds. Existing programs and legislation, on the other hand, provide a satisfactory framework for carrying out the essential objective of this bill, and permits substantial latitude for adjustment to changing circumstances.

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

JOHN H. KYL,
Assistant Secretary of the Interior.

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94TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
2d Session } { No. 99-991

PROVIDING ADDITIONAL COPIES OF HOUSING REPORT

APRIL 1, 1976.—Referred to the House Calendar and ordered to be printed

Mr. BRADEMAS, from the Committee on House Administration, submitted the following

REPORT

[To accompany H. Res. 927]

The Committee on House Administration, to whom was referred the resolution (H. Res. 927) having considered the same, report favorably thereon with an amendment and recommend that the resolution as amended do pass.

By voice vote the Committee adopted a motion to report House Resolution 927, as amended.

The amendment is as follows:

Page 1, lines 2 and 3, delete "two thousand five hundred" and insert in lieu thereof "one thousand".

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